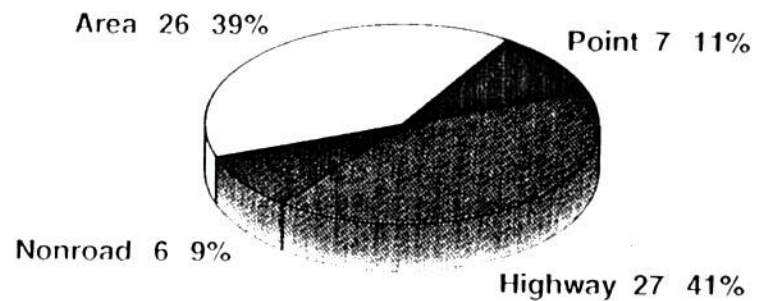
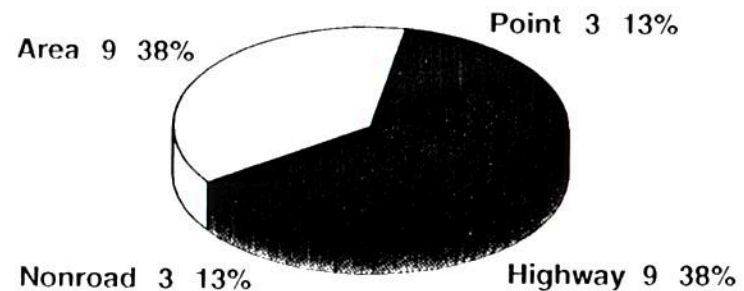


# 1990 BASE YEAR EMISSIONS INVENTORY

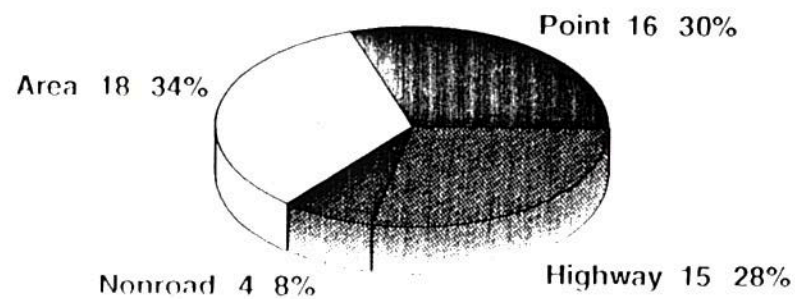
## TOTAL ANTHROPOGENIC VOC EMISSIONS IN TONS/DAY



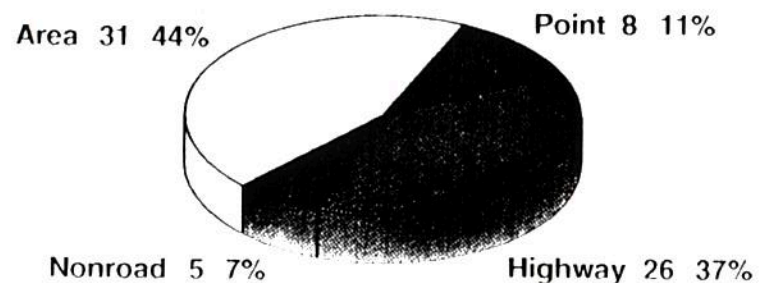
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SHARON



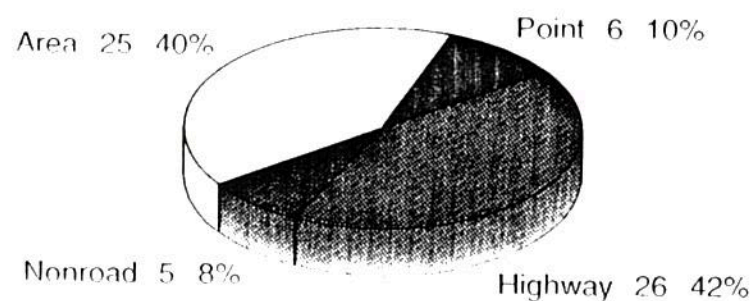
ERIE



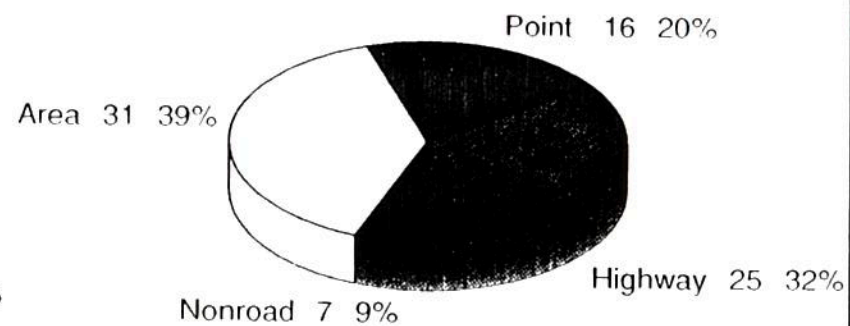
STATE COLLEGE



**1990 BASE YEAR EMISSIONS INVENTORY**  
**TOTAL ANTHROPOGENIC VOC EMISSIONS IN TONS/DAY**  
**PENNSYLVANIA**



**JOHNSTOWN**



**WILLIAMSPORT**



TABLE 1.1A  
ZONE 1 PHILADELPHIA SEVERE OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
BUCKS	65	30	6	37	41	179
CHESTER	24	21	4	27	66	142
DELAWARE	69	28	9	26	9	141
MONTGOMERY	7	39	8	50	33	137
PHILADELPHIA	26	80	12	55	6	179
TOTAL	191	198	40	195	156	778

TABLE 1.1 B  
ZONE 1 PHILADELPHIA SEVERE OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BUCKS	13	2	11	37	63
CHESTER	27	2	8	29	66
DELAWARE	105	2	12	24	143
MONTGOMERY	7	2	17	50	76
PHILADELPHIA	33	3	23	52	111
TOTAL	185	11	71	192	459

TABLE 1.1 C  
ZONE 1 PHILADELPHIA SEVERE OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BUCKS	120	3	89	235	448
CHESTER	26	2	61	179	268
DELAWARE	12	3	81	161	257
MONTGOMERY	14	5	143	325	486
PHILADELPHIA	20	8	195	364	587
TOTAL	192	21	569	1265	2047

Totals may not sum due to rounding

TABLE 1.2 A  
 ZONE 2 READING MODERATE OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
BERKS	20	24	5	21	74	144
TOTAL	20	24	5	21	74	144

TABLE 1.2 B  
 ZONE 2 READING MODERATE OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BERKS	19	3	10	22	54
TOTAL	19	3	10	22	54

TABLE 1.2 C  
 ZONE 2 READING MODERATE OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BERKS	10	11	74	146	241
TOTAL	10	11	74	146	241

Totals may not sum due to rounding

TABLE 1.3 A  
 ZONE 3 LANCASTER MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
LANCASTER	29	31	7	28	59	154
TOTAL	29	31	7	28	59	154

TABLE 1.3 B  
 ZONE 3 LANCASTER MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
LANCASTER	14	3	14	28	59
TOTAL	14	3	14	28	59

TABLE 1.3 C  
 ZONE 3 LANCASTER MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
LANCASTER	1	20	91	179	291
TOTAL	1	20	91	179	291

Totals may not sum due to rounding



TABLE 1.4 A  
 ZONE 4 ALLENTOWN (ABE) MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
CARBON	0	4	1	3	37	45
LEHIGH	7	20	3	13	22	65
NORTHAMPTON	4	16	3	21	30	74
TOTAL	11	40	7	39	88	185

TABLE 1.4 B  
 ZONE 4 ALLENTOWN (ABE) MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CARBON	0	1	1	5	7
LEHIGH	173	2	7	13	195
NORTHAMPTON	167	1	6	21	195
TOTAL	340	5	14	39	398

TABLE 1.4 C  
 ZONE 4 ALLENTOWN (ABE) MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CARBON	0	4	10	31	45
LEHIGH	16	7	63	81	167
NORTHAMPTON	423	8	40	134	605
TOTAL	439	19	113	246	817

Totals may not sum due to rounding



TABLE 1.5 A  
ZONE 5 YORK MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
ADAMS	5	7	1	6	37	56
YORK	16	24	6	25	70	141
MSA-TOTAL	21	31	7	31	107	197
FRANKLIN	3	10	2	11	66	93
ZONE TOTAL	24	42	9	42	174	291

TABLE 1.5 B  
ZONE 5 YORK MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
ADAMS	0	1	3	6	9
YORK	161	2	10	24	197
MSA-TOTAL	161	3	12	30	206
FRANKLIN	1	1	4	11	16
ZONE TOTAL	162	4	16	40	221

TABLE 1.5 C  
ZONE 5 YORK MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
ADAMS	0	5	14	32	51
YORK	21	14	76	169	279
MSA-TOTAL	21	19	90	201	330
FRANKLIN	0	7	21	73	101
ZONE TOTAL	21	26	111	274	432

Totals may not sum due to rounding

TABLE 1.6 A  
ZONE 6 HARRISBURG MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
CUMBERLAND	4	15	3	18	45	85
DAUPHIN	3	16	4	22	44	89
LEBANON	11	9	2	8	32	62
PERRY	0	4	1	3	50	58
TOTAL	18	44	9	51	170	292

TABLE 1.6 B  
ZONE 6 HARRISBURG MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CUMBERLAND	6	2	5	19	31
DAUPHIN	7	2	6	22	37
LEBANON	2	1	3	8	14
PERRY	2	0	1	3	6
TOTAL	16	6	14	52	88

TABLE 1.6 C  
ZONE 6 HARRISBURG MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CUMBERLAND	0	10	33	138	181
DAUPHIN	28	8	44	155	235
LEBANON	1	7	20	58	86
PERRY	1	2	5	19	27
TOTAL	30	27	101	370	528

Totals may not sum due to rounding

TABLE 1.7 A  
ZONE 7 SCRANTON MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
COLUMBIA	1	5	1	5	29	42
LACKAWANNA	10	12	3	15	33	73
LUZERNE	8	20	4	21	69	122
MONROE	1	8	1	9	51	70
WYOMING	1	2	1	2	22	28
MSA-TOTAL	21	47	11	52	204	335
PIKE	0	2	0	3	51	57
SCHUYKILL	5	12	2	10	68	97
SUSQUEEHANNA	0	4	1	4	54	62
WAYNE	0	3	1	3	50	57
ZONE TOTAL	26	68	15	72	426	607

TABLE 1.7 B  
ZONE 7 SCRANTON MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
COLUMBIA	1	1	2	5	9
ACKAWANNA	2	2	5	15	24
LUZERNE	11	4	6	21	42
MONROE	1	1	2	10	13
WYOMING	8	0	1	2	11
MSA-TOTAL	23	7	16	53	99
PIKE	0	0	0	4	5
SCHUYKILL	59	4	4	11	77
SUSQUEEHANNA	0	0	1	4	6
WAYNE	0	0	1	3	4
ZONE TOTAL	82	12	23	76	193

TABLE 1.7 C  
 ZONE 7 SCRANTON MARGINAL OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
COLUMBIA	0	4	14	35	53
LACKAWANNA	0	6	39	107	152
LUZERNE	1	12	53	149	215
MONROE	0	6	13	67	85
WYOMING	2	10	5	11	24
MSA-TOTAL	3	38	124	369	528
PIKE	0	2	3	26	31
SCHUYKILL	2	10	27	67	107
SUSQUEHANNA	0	2	7	29	38
WAYNE	0	2	6	18	27
ZONE TOTAL	5	55	167	508	735

Totals may not sum due to rounding

TABLE 1.8 A  
ZONE 8 ALTOONA MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
BLAIR	2	11	2	8	44	67
MSA-TOTAL	2	11	2	8	44	67
BEDFORD	1	5	1	7	79	93
FULTON	0	2	0	3	27	32
HUNTINGTON	0	4	1	3	63	71
JUNIATA	1	2	1	2	36	41
MIFFLIN	2	4	1	3	39	49
ZONE TOTAL	7	26	6	27	288	354

TABLE 1.8 B  
ZONE 8 ALTOONA MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BLAIR	6	1	4	8	19
MSA-TOTAL	6	1	4	8	19
BEDFORD	5	1	2	9	16
FULTON	0	0	1	4	5
HUNTINGTON	0	1	1	4	6
JUNIATA	1	0	1	2	4
MIFFLIN	1	1	1	3	6
ZONE TOTAL	13	3	10	29	55

TABLE 1.8 C  
ZONE 8 ALTOONA MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BLAIR	2	8	21	49	80
MSA-TOTAL	2	8	21	49	80
BEDFORD	1	3	7	62	73
FULTON	0	1	2	28	31
HUNTINGTON	0	3	7	21	31
JUNIATA	0	1	4	11	16
MIFFLIN	8	3	9	18	38
ZONE TOTAL	11	19	50	190	270

Totals may not sum due to rounding

TABLE 1.9 A  
ZONE 9 STATE COLLEGE AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
CAMERON	0	1	0	0	32	33
CENTRE	0	14	2	9	124	149
CLEARFIELD	0	7	1	7	121	136
CLINTON	2	3	1	3	110	119
SNYDER	2	3	1	3	30	39
UNION	4	3	1	3	33	44
TOTAL	8	31	5	26	450	520

TABLE 1.9 B  
ZONE 9 STATE COLLEGE AREA  
EMISSIONS IN TONS PER DAY OF NOx

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CAMERON	0	0	0	0	0
CENTRE	7	2	3	10	21
CLEARFIELD	46	1	2	8	57
CLINTON	16	0	1	4	22
SNYDER	38	0	1	3	43
UNION	2	0	1	4	8
TOTAL	109	5	8	28	150

TABLE 1.9 C  
ZONE 9 STATE COLLEGE AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CAMERON	0	1	1	2	4
CENTRE	4	31	18	60	112
CLEARFIELD	2	5	12	53	72
CLINTON	3	3	6	26	38
SNYDER	2	2	8	17	29
UNION	0	2	7	23	32
TOTAL	10	43	51	180	285

Totals may not sum due to rounding



TABLE 1.10 A  
ZONE 10 WILLIAMSPORT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
BRADFORD	3	6	1	4	75	89
LYCOMING	3	8	2	8	89	110
MONTOUR	1	5	0	2	8	16
NORTHUMBERLAND	8	7	2	6	40	63
POTTER	0	2	0	1	81	84
SULLIVAN	0	1	0	1	34	36
TIOGA	0	4	1	3	70	78
TOTAL	16	31	7	25	397	476

TABLE 1.10 B  
ZONE 10 WILLIAMSPORT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BRADFORD	1	1	3	4	8
LYCOMING	4	1	4	8	17
MONTOUR	121	0	1	2	124
NORTHUMBERLAND	3	1	3	6	13
POTTER	18	0	1	1	20
SULLIVAN	0	0	1	1	2
TIOGA	3	0	1	3	8
TOTAL	150	4	12	25	191

TABLE 1.10 C  
ZONE 10 WILLIAMSPORT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
BRADFORD	0	4	12	21	37
LYCOMING	1	8	25	51	85
MONTOUR	4	1	3	13	22
NORTHUMBERLAND	1	6	19	38	64
POTTER	2	2	3	7	13
SULLIVAN	0	0	2	3	5
TIOGA	1	2	6	17	27
TOTAL	9	23	69	150	251

Totals may not sum due to rounding



TABLE 1.11 A  
 ZONE 11 PITTSBURGH MODERATE OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
ALLEGHENY	81	71	19	90	26	287
ARMSTRONG	1	5	1	4	46	58
BEAVER	7	10	2	13	31	64
BUTLER	1	11	2	11	46	72
FAYETTE	1	10	2	8	62	83
WASHINGTON	1	14	3	16	45	79
WESTMORELAND	4	26	5	27	68	130
MSA-TOTAL	97	148	35	169	324	772
GREENE	1	3	1	3	31	39
ZONE TOTAL	98	151	35	172	355	811

TABLE 1.11 B  
 ZONE 11 PITTSBURGH MODERATE OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
ALLEGHENY	73	1	27	83	184
ARMSTRONG	189	1	2	4	195
BEAVER	210	1	4	12	226
BUTLER	5	1	4	11	21
FAYETTE	3	2	3	8	15
WASHINGTON	49	1	5	18	73
WESTMORELAND	19	3	9	29	59
MSA-TOTAL	548	9	53	166	775
GREENE	136	1	1	3	141
ZONE TOTAL	684	10	54	169	916

TABLE 1.11 C  
 ZONE 11 PITTSBURGH MODERATE OZONE NONATTAINMENT AREA  
 EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
ALLEGHENY	438	7	201	542	1188
ARMSTRONG	6	4	10	24	44
BEAVER	20	3	24	71	118
BUTLER	230	9	26	69	334
FAYETTE	0	8	17	46	71
WASHINGTON	5	9	30	108	152
WESTMORELAND	26	2	68	170	266
MSA-TOTAL	725	42	376	1030	2173
GREENE	4	2	5	21	33
ZONE TOTAL	729	44	381	1051	2205

Totals may not sum due to rounding

TABLE 1.12 A  
ZONE 12 SHARON MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
MERCER	3	9	3	9	44	68
MSA-TOTAL	3	9	3	9	44	68
CLARION	1	3	1	4	47	56
JEFFERSON	0	3	1	4	50	58
LAWRENCE	1	7	1	6	25	40
VENANGO	1	5	1	5	68	80
ZONE TOTAL	7	28	7	28	234	304

TABLE 1.12 B  
ZONE 12 SHARON MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
MERCER	11	1	4	10	25
MSA-TOTAL	11	1	4	10	25
CLARION	3	0	2	5	10
JEFFERSON	3	0	2	5	11
LAWRENCE	33	1	2	6	42
VENANGO	3	0	1	5	10
ZONE TOTAL	53	2	11	31	97

TABLE 1.12 C  
ZONE 12 SHARON MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
MERCER	320	7	23	62	412
MSA-TOTAL	320	7	23	62	412
CLARION	0	3	7	31	40
JEFFERSON	0	3	9	27	39
LAWRENCE	6	3	14	36	59
VENANGO	3	4	7	29	43
ZONE TOTAL	329	19	60	185	593

Totals may not sum due to rounding

TABLE 1.13 A  
ZONE 13 ERIE MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
ERIE	16	18	4	15	40	93
MSA-TOTAL	16	18	4	15	40	93
CRAWFORD	0	7	2	6	60	75
ELK	0	3	1	2	79	84
FOREST	0	1	0	1	38	40
McKEAN	1	4	1	3	87	95
WARREN	5	4	1	3	75	87
ZONE TOTAL	23	36	8	29	379	475

TABLE 1.13 B  
ZONE 13 ERIE MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
ERIE	32	1	7	16	56
MSA-TOTAL	32	1	7	16	56
CRAWFORD	4	1	3	7	14
ELK	4	0	1	2	8
FOREST	4	0	0	1	5
McKEAN	5	0	1	3	10
WARREN	12	0	1	3	17
ZONE TOTAL	62	2	14	32	111

TABLE 1.13 C  
ZONE 13 ERIE MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
ERIE	6	7	51	106	99
MSA-TOTAL	6	7	51	106	99
CRAWFORD	0	5	16	41	62
ELK	1	2	8	11	22
FOREST	1	2	1	3	7
McKEAN	1	3	8	15	27
WARREN	1	3	8	17	28
ZONE TOTAL	10	22	91	193	316

Totals may not sum due to rounding

TABLE 1.14 A  
ZONE 14 JOHNSTOWN MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF VOC

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	BIOGENIC	TOTAL
CAMBRIA	1	11	2	11	62	87
SOMERSET	1	7	1	8	100	117
MSA-TOTAL	2	18	3	19	162	204
INDIANA	4	8	1	7	71	91
ZONE TOTAL	6	25	5	26	232	294

TABLE 1.14 B  
ZONE 14 JOHNSTOWN MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF NO<sub>x</sub>

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CAMBRIA	6	2	4	9	20
SOMERSET	1	1	2	9	14
MSA-TOTAL	7	3	6	18	34
INDIANA	340	1	3	6	350
ZONE TOTAL	347	4	8	25	384

TABLE 1.14 C  
ZONE 14 JOHNSTOWN MARGINAL OZONE NONATTAINMENT AREA  
EMISSIONS IN TONS PER DAY OF CO

COUNTY	POINT	AREA	OFF-ROAD	HIGHWAY	TOTAL
CAMBRIA	41	7	22	65	135
SOMERSET	6	5	12	61	84
MSA-TOTAL	47	11	34	126	218
INDIANA	11	5	14	38	68
ZONE TOTAL	58	17	48	164	287

Totals may not sum due to rounding

## **OZONE AND AIR QUALITY IN PENNSYLVANIA**

- **ATTAINMENT/NONATTAINMENT  
AREAS**
- **AIR QUALITY TRENDS**





## The Ozone Standard

Ozone is one of the criteria pollutants for which EPA has established a health-based National Ambient Air Quality Standard (NAAQS). The NAAQS for ozone is 120 parts per billion structured in terms of expected exceedances. An exceedance of the standard occurs when any air quality monitor measures an ambient concentration of ozone greater than 120 parts per billion. A violation of the ozone standard occurs when four or more exceedances are measured at any one monitor within a three year period. For example, an area may have four monitors, all of which measure one exceedance during a three year period. This is not a violation. A violation occurs when four or more exceedances are measured at one monitor.

The design value of an area is the fourth highest measured concentration of ozone of any monitor in the area for a given ozone season.

Based on the Act, EPA is authorized to designate areas where the air quality monitors indicate ozone pollution levels above the NAAQS, as nonattainment and to classify them according to the degree of severity. There are five ozone nonattainment area classifications. These are marginal, moderate, serious, severe and extreme. Pursuant to section 107(d) (4) (A) of the Clean Air Act, the geographic boundaries of a nonattainment area designated extreme, severe or serious, must include the entire metropolitan statistical area (MSA) or consolidated metropolitan statistical area (CMSA). The boundary of a moderate nonattainment area must also be the MSA unless the State has successfully demonstrated that an area included in the MSA does not contribute to the air quality problem. The States' opportunity to change the boundaries of a nonattainment area closed in 1991.



## 1. REQUIREMENTS FOR OZONE NONATTAINMENT AREAS

### 1.1 CLASSIFICATION AND ATTAINMENT DATES FOR OZONE NONATTAINMENT AREAS

<u>Classification</u>	<u>Ozone Design Value</u>	<u>Attainment Deadline (from enactment)</u>
Marginal	0.121 up to 0.138 ppm	3 years
Moderate	0.138 up to 0.160 ppm	6 years
Serious	0.160 up to 0.180 ppm	9 years
Severe*	0.180 up to 0.280 ppm	15 years
Extreme	0.280 ppm and above	20 years

#### Exceptions

- A severe area with a 1988 design value between 0.190 and 0.280 ppm is given an attainment date of 17 years instead of 15 years after enactment.
- EPA may change the classification of a nonattainment area if the design value is within 5% higher or lower than the level of the other classification. Adjustment must be made within 90 days after the initial classification.
- An ozone nonattainment area designated by EPA as a rural transport area will be considered in compliance if it makes the plan submissions for a marginal area. EPA may designate an area a rural transport area if it does not include or is not a part of a MSA or CMSA and if EPA determines that the VOC emissions (and NO<sub>x</sub> if relevant) do not contribute significantly to ozone concentrations in the area, or to other areas.
- "Transitional" areas, i.e., areas designated nonattainment as of enactment that did not violate the ozone standard from January 1, 1987 to December 31, 1989, are suspended from these subpart requirements until December 31, 1991. EPA must determine, by June 30, 1992, whether or not the area attained the standard by December 31, 1991. If so, the state is required to submit a maintenance plan for the area within 12 months. If not, the area will be designated nonattainment (by June 30, 1992).



# PENNSYLVANIA NONATTAINMENT AREAS

(as of November 6, 1991)

## CARBON MONOXIDE

Portions of Philadelphia County (Moderate  $\leq 12.7$  ppm)  
Portions of Allegheny County (Not classified)

## OZONE

Philadelphia-Wilmington-Trenton Area (Severe 15)

- Bucks County
- Chester County
- Delaware County
- Montgomery County
- Philadelphia County

Pittsburgh-Beaver Valley Area (Moderate)

- Allegheny County
- Fayette County
- Washington County
- Westmoreland County
- Beaver County
- Armstrong County
- Butler County

Reading Area (Moderate)

- Berks County

Allentown-Bethlehem-Easton Area (Marginal)

- Carbon County
- Lehigh County
- Northampton County

Altoona Area (Marginal)

- Blair County

Erie Area (Marginal)

- Erie County

Scranton-Wilkes Barre Area (Marginal)

- Columbia County
- Lackawanna County
- Luzerne County
- Monroe County
- Wyoming County

York Area (Marginal)

- Adams County
- York County





Lancaster Area (Marginal)  
Lancaster County

Harrisburg-Lebanon-Carlisle Area (Marginal)  
Cumberland County  
Dauphin County  
Lebanon County  
Perry County

Johnstown Area (Marginal)  
Cambria County  
Somerset County

Sharon Area (Marginal)  
Mercer County

Lawrence County (Nonattainment; Incomplete data)

Pike County (Nonattainment; Incomplete data)

\* Schuylkill County (Nonattainment; Incomplete data)

Susquehanna County (Nonattainment; Incomplete data)

Wayne County (Nonattainment; Incomplete data)

Franklin County (Nonattainment; Incomplete data)

Juniata County (Nonattainment; Incomplete data)

Northumberland County (Nonattainment; Incomplete data)

Snyder County (Nonattainment; Incomplete data)

Crawford County (Nonattainment; Incomplete data)

Warren County (Nonattainment; Incomplete data)

Greene County (Nonattainment; Incomplete data)

**LEAD**

No nonattainment areas

**NITROGEN DIOXIDE**

No nonattainment areas

**PM-10**

Clairton, PA

**SULFUR DIOXIDE**

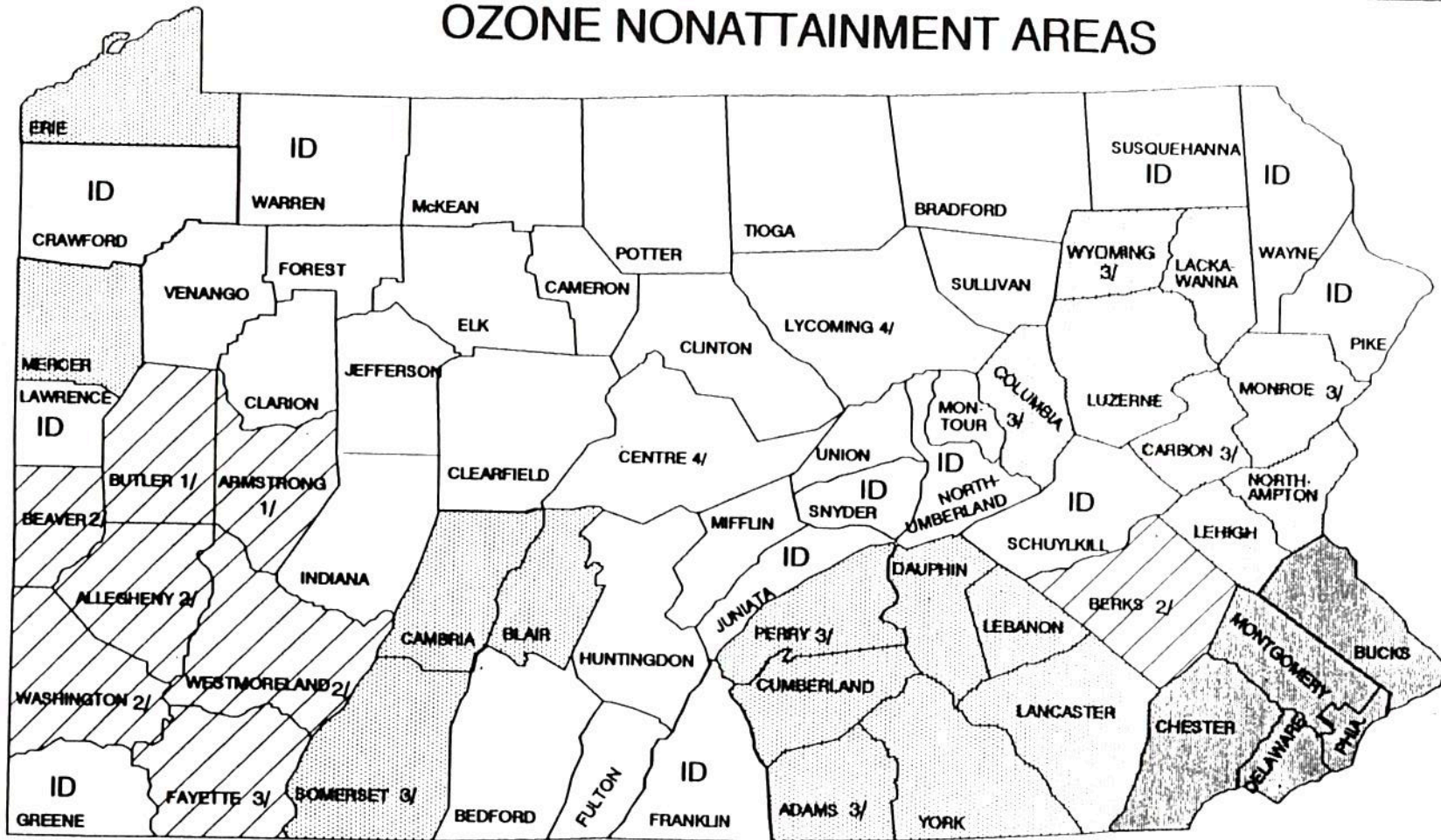
Warren County  
Allegheny County  
Armstrong County





Exhibit 1

# OZONE NONATTAINMENT AREAS



NONATTAINMENT STATUS: MARGINAL MODERATE SEVERE | ID | Incomplete data (no I/M required)

1/ Non metropolitan area, no I/M program required.

2/ Request to redesignate as attainment pending before EPA.

3/ EPA waiver for "rural" counties no I/M program required.

4/ Centre & Lycoming Co. are part of the enhanced I/M program due to population.

Source: PA Department of Transportation



**EPA REGION III - OZONE MONITORING DATA**  
**1990 to 1995**

NONATTAINMENT AREA	1990 CLEAN AIR ACT CLASSIFICATION	1989 DESIGN VALUE	1990		1991		1992		1993		1994		1995	
			NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV
BALTIMORE	SEVERE	194	18	181	32	159	17	156	23	150	18	135	37	151
PHILADELPHIA	SEVERE	187	44	187	83	152	14	153	40	156	15	140	44	146
WASHINGTON	SERIOUS	165	9	165	23	134	2	134	16	136	11	133	13	135
PITTSBURGH	MODERATE	149	0	149	2	132	0	115	1	119	4	121	17	133
RICHMOND	MODERATE	142	1	142	1	121	1	122	5	128	1	128	3	124
READING	MODERATE	141	0	141	1	117	0	118	0	118	2	106	0	114
ALLENTOWN	MARGINAL	137	0	137	1	116	0	116	0	115	0	108	0	114
HARRISBURG	MARGINAL	136	2	131	0	110	0	113	0	110	0	118	0	118
SHARON	MARGINAL	134	0	128	1	115	0	113	0	106	0	106	0	101
JOHNSTOWN	MARGINAL	133	0	133	0	109	0	108	0	107	0	095	0	100
HAMPTON ROADS	MARGINAL	130	1	125	1	110	3	110	4	131	0	131	0	122
SUSSEX, DE	MARGINAL	130	1	140	3	128	0	128	0	118	0	110	0	110
ALTOONA	MARGINAL	129	0	129	0	106	0	106	0	105	0	104	0	104
ERIE	MARGINAL	129	0	128	0	113	0	105	0	110	0	108	0	107
SCRANTON	MARGINAL	129	0	129	4	123	0	117	0	117	0	107	0	110
LANCASTER	MARGINAL	125	0	122	0	113	0	117	1	118	0	116	0	116
KENT & QUEEN ANNE'S COUNTIES, MD	MARGINAL	NONE	1	131	6	133	0	131	2	133	0	121	1	122
YORK	MARGINAL	129	1	129	0	119	0	119	0	113	0	112	0	112





NONATTAINMENT AREA	1990 CLEAN AIR ACT CLASSIFICATION	1989 DESIGN VALUE	1990		1991		1992		1993		1994		1995	
			NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV	NO. EXC	AQV
GREENBRIER	MARGINAL - REDES. TO ATTAINMENT	125	0	125	1	108	0	101	0	101	0	096	0	097
HUNTINGTON	MODERATE - REDES. TO ATTAINMENT	164	5	155	6	144	0	142	1	119	1	119	1	122
PARKERSBURG	MODERATE - REDES. TO ATTAINMENT	152	0	146	0	119	0	116	0	103	0	110	0	121
CHARLESTON	MODERATE - REDES. TO ATTAINMENT	138	0	138	1	119	0	118	0	106	0	086	0	110
SMYTH, VA	RURAL TRANSPORT	125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

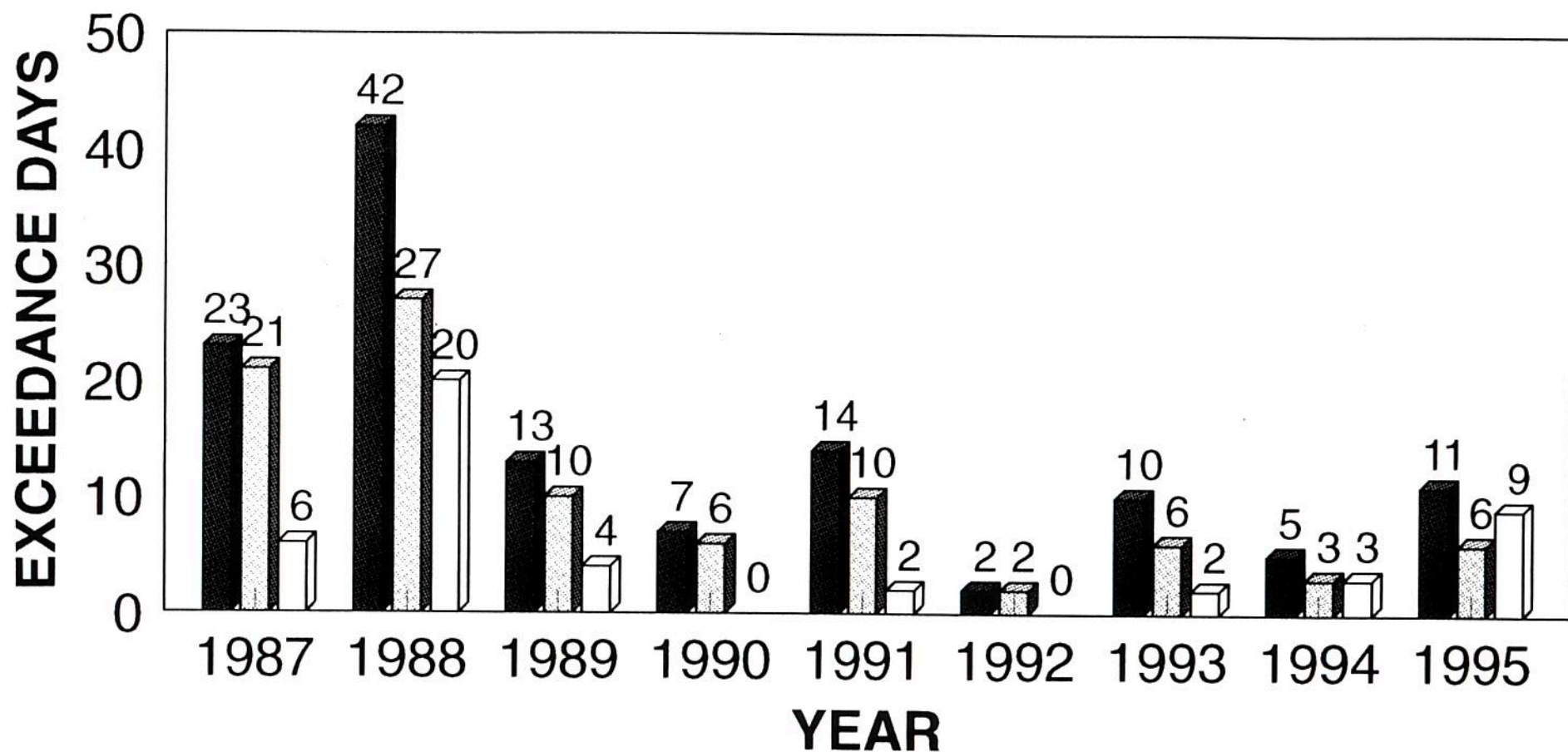
**Notes on this table:**

- Data units are parts per billion (ppb).  
The ozone standard is 0.12 parts per million (120 ppb).
- AQV = Air Quality Value for the most recent three year period.
- No. Exc = number of exceedances actually monitored.
- N.D. = no data





# PA EXCEEDANCE DAYS

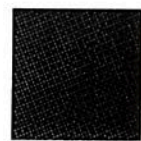
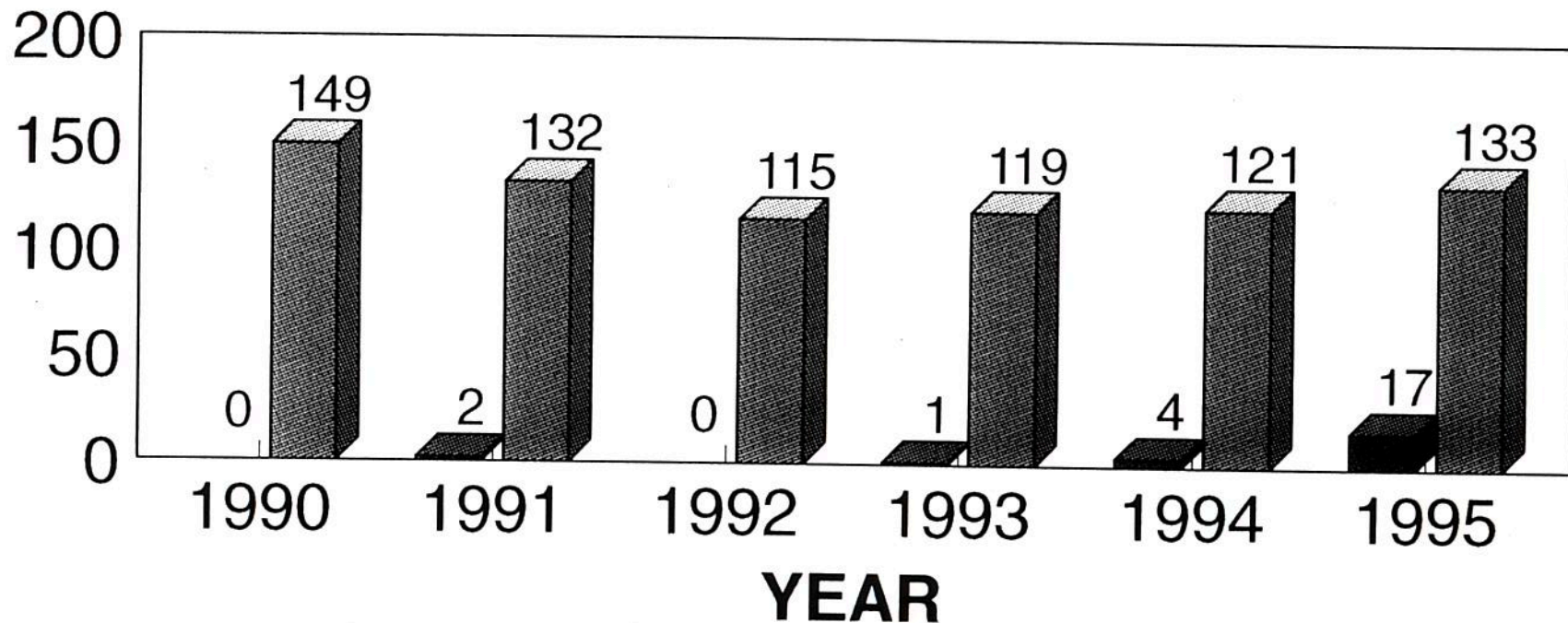


■ # OF DAYS STATEWIDE    ▨ # OF DAYS PHILADELPHIA    □ # OF DAYS PITTSBURGH

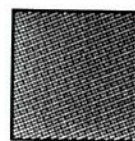
Philadelphia includes five county area



# OZONE MONITORING DATA PITTSBURGH



NUMBER OF  
EXCEEDANCES



AIR QUALITY  
VALUE



## **CLEAN AIR ACT CONTROL OF OZONE POLLUTION**

- **TITLES I & II**
- **STATUS OF STATE SUBMITTALS**



### The Role of the Federal Government and the Role of the States\*

Although the 1990 Clean Air Act is a federal law covering the entire country, the states do much of the work to carry out the Act. For example, a state air pollution agency holds a hearing on a permit application by a power or chemical plant or fines a company for violating air pollution limits.

Under this law, EPA sets limits on how much of a pollutant can be in the air anywhere in the United States. This ensures that all Americans have the same basic health and environmental protections. The law allows individual states to have stronger pollution controls, but states are not allowed to have weaker pollution controls than those set for the whole country.

The law recognizes that it makes sense for states to take the lead in carrying out the Clean Air Act, because pollution control problems often require special understanding of local industries, geography, housing patterns, etc.

States have to develop **state implementation plans (SIPs)** that explain how each state will do its job under the Clean Air Act. A state implementation plan is a collection of the regulations a state will use to clean up polluted areas. The states must involve the public, through hearings and opportunities to comment, in the development of each state implementation plan.

EPA must approve each SIP, and if a SIP isn't acceptable, EPA can take over enforcing the Clean Air Act in that state.

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Taken from "The Plain English Guide to the Clean Air Act" (EPA 400-K-93-001 April 1993).





## Title I: Provisions for Attainment and Maintenance of National Ambient Air Quality Standards

Although the Clean Air Act Of 1977 brought about significant improvements in our Nation's air quality, the urban air pollution problems of ozone (smog), carbon monoxide (CO) and particulate matter (PM-10) persist. Currently, over 100 million Americans live in cities which are out of attainment with the with the public health standards for ozone.

The most widespread and persistent urban pollution problem is ozone. The causes of this and the lesser problem of carbon monoxide (CO) and particulate matter (PM-10) pollution in our urban areas are largely due to the diversity and number of urban air pollution sources. One component of urban smog - hydrocarbons - comes from automobile emissions, petroleum refineries, chemical plants, dry cleaners, gasoline stations, house painting and printing shops. Another key component - nitrogen oxides - comes from the combustion of fuel for transportation, utilities and industries.

While there are other reasons for continued high levels of ozone pollution, such as growth in the number of stationary sources of hydrocarbons and continued growth in automobile travel, perhaps the most telling reason is that the remaining sources of hydrocarbons are also the most difficult to control. These are the small sources - generally those that emit less than 100 tons of hydrocarbons per year. These sources, such as auto body shops and dry cleaners, may individually emit less than 10 tons per year, but collectively emit many hundreds of tons of pollution.

The Clean Air Act Amendments of 1990 create a new, balanced strategy for the Nation to attack the problem of urban smog. Overall, the new law reveals the Congress's high expectations of the states and the Federal government. While it gives states more time to meet the air quality standard - up to 20 years for ozone in Los Angeles -, it also requires states to make constant formidable progress in reducing emissions. It requires the Federal government to reduce emissions from cars, trucks, and buses; from consumer products such as hair spray and window washing compounds; and from ships and barges during loading and unloading of petroleum products. The Federal government must also develop the technical guidance that States need to control stationary sources.

The new law addresses the urban air pollution problems of ozone (smog), carbon monoxide (CO), and particulate matter (PM-10). Specifically, it clarifies how areas are designated and redesignated "attainment." It also allows EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet Federal air quality standards designed to protect public health.

The new law also establishes provisions defining when and how the federal government can impose sanctions on areas of the country that have not met certain conditions.

For the pollutant ozone, the new law establishes nonattainment area classifications ranked according to the severity of the areas's air pollution problem. These classifications are marginal, moderate, serious, severe and extreme. EPA assigns each nonattainment area one of these categories, thus triggering varying requirements the area must comply with im-





order to meet the ozone standard.

As mentioned, nonattainment areas will have to implement different control measures, depending upon their classification. Marginal areas, for example, are the closest to meeting the standard. They will be required to conduct an inventory of their ozone-causing emissions and institute a permit program. Nonattainment areas with more serious air quality problems must implement various control measures. The worse the air quality, the more controls areas will have to implement.

The new law also establishes similar programs for areas that do not meet the federal health standards for the pollutants carbon monoxide and particulate matter. Areas exceeding the standards for these pollutants will be divided into "moderate" and "serious" classifications. Depending upon the degree to which they exceed the carbon monoxide standard, areas will be required to implement programs introducing oxygenated fuels and/or enhanced emission inspection programs, among other measures. Depending upon their classification, areas exceeding the particulate matter standard will have to implement either reasonably available control measures (RACM) or best available control measures (BACM), among other requirements.

## Title II: Provisions Relating to Mobile Sources

While motor vehicles built today emit fewer pollutants (60% to 80% less, depending on the pollutant) than those built in the 1960s, cars and trucks still account for almost half the emissions of the ozone precursors VOCs and NOx, and up to 90% of the CO emissions in urban areas. The principal reason for this problem is the rapid growth in the number of vehicles on the roadways and the total miles driven. This growth has offset a large portion of the emission reductions gained from motor vehicle controls.

In view of the unforeseen growth in automobile emissions in urban areas combined with the serious air pollution problems in many urban areas, the Congress has made significant changes to the motor vehicle provisions on the 1977 Clean Air Act.

The Clean Air Act of 1990 establishes tighter pollution standards for emissions from automobiles and trucks. These standards will reduce tailpipe emissions of hydrocarbons, carbon monoxide, and nitrogen oxides on a phased-in basis beginning in model year 1994. Automobile manufacturers will also be required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling.

Fuel quality will also be controlled. Scheduled reductions in gasoline volatility and sulfur content of diesel fuel, for example, will be required. New programs requiring cleaner (so-called "reformulated" gasoline) will be initiated in 1995 for the nine cities with the worst ozone problems. Other cities can "opt in" to the reformulated gasoline program. Higher levels (2.7%) of alcohol-based oxygenated fuels will be produced and sold in 41 areas during the winter months that exceed the federal standard for carbon monoxide.

The new law also establishes a clean fuel car pilot program in California, requiring the phase-in of tighter emission limits for 150,000 vehicles in model year 1996 and 300,000 by the model year 1999. These standards can be met with any combination of vehicle technology and cleaner fuels. The standards become even stricter in 2001. Other states



can "opt in" to this program, though only through incentives, not sales or production mandates.

Further, twenty-six of the dirtiest areas of the country will have to adopt a program limiting emissions from centrally-fueled fleets of 10 or more vehicles beginning as early as 1998.





## **Title I - Nonattainment**

- o **Divides cities into six categories for ozone (3 yrs. - marginal, 6 yrs. moderate, 9 yrs serious, 15 - 17 yrs severe, 20 yrs extreme) and 2 categories for Carbon monoxide.**
- o **% Reduction: Applies to ozone only. Moderate areas and above must achieve 15% VOC reduction within 6 years of enactment. For serious and above, average of 3% VOC per year thereafter until attainment. Annual VOC and NOx reductions as needed to attain. The 15% and 3% is from an adjusted baseline and all reductions except those from existing FMVCP, gasoline volatility, RACT and I/M fixups are creditable. Possible exemption from % reduction based on technological feasibility, if SIP adopts measures similar to those in next higher category and if all feasible measures are adopted in the first 6 years. NOx substitution possible after 6 years.**
- o **Prescribed Measures: Major NOx sources meet same requirements as major VOC sources unless EPA finds no benefit. All ozone nonattainment areas correct existing RACT rules and I/M programs. Moderate areas add basic I/M, Stage II and RACT on new and existing CTG and 100 ton non-CTG sources, and make an attainment demonstration. Serious areas add enhanced I/M, RACT on 50 ton non-CTG sources, a fleet vehicle program in areas of 250,000 and up, TCMs needed to offset vehicle growth, special rules for source modifications, and photochemical modeling attainment demonstration. Severe areas add RACT for 25 ton VOC non-CTG sources and provisions requiring adoption of TCMs, if necessary to meet progress requirements and employer trip reduction provisions. Extreme areas add RACT on 10 ton sources, eliminate feasibility exemption from 15% and 3%, add NOx reductions from clean fuels or advanced technology, have peak hour traffic controls; can get SIP approved based on anticipated new technology.**
- o **Federal Measures: EPA issues 11 new CTGs plus CTGs for aerospace coatings, shipbuilding and repair; marine vessels rule and consumer products rules. Requires an ACT for 25 ton NOx and VOC sources.**
- o **Sanctions: Grace period of 18 months to cure planning failure. Then must apply 1 of 2 sanctions (modified highway ban or 2:1 offset). Air grants are available. There are Existing construction bans remain, but no new ones.**
- o **Federal Implementation Plans (FIPs): Within 2 years of state failure to develop an adequate SIP, mandatory attainment FIPs required.**
- o **Transport: Sets up 11-state NE transport commission. Requires transport states to adopt RACT for existing and new CTGs, RACT on major (50-ton) non-CTG sources, enhanced I/M in MSAs above 100,000 and Stage II or equivalent. No opt-out of VOC measures. Major NOx sources meet same requirements as major VOC sources unless EPA finds no benefit.**
- o **CO and PM-10: Wintertime oxygenated fuels in all CO areas >9.4 ppm. Areas >12.7 ppm add VMT forecast, enhanced I/M and demonstrate attainment. Serious CO areas add TCMs as in severe ozone areas. PM-10 areas initially designated nonattainment must attain by 12/94 (possible extension to 2001). Moderate areas adopt RACM; serious areas add BACM. Serious CO and PM-10 areas adopt measures to achieve 5% reduction per year effective upon failure to attain.**





## Title II - Mobile Sources

- o **Tailpipe Standards:** Cars and light trucks: Tier I is 0.25 NMHC, 3.4 CO and 0.4 NOx. Possible Tier II is 0.125 NMHC, 1.7 CO and 0.2 NOx. Tier I phased in 1994-1996. Effectiveness of Tier II in 2004 depends on EPA study of need, feasibility, and cost-effectiveness. Useful life extended to 100,000 miles for most emission standards.
- o **Cold Temperature CO:** Phase-in beginning in 1994 of 10 gpm at 20 degrees F for cars. A 3.4 gpm standard takes effect in 2002 if 6 or more cities are in CO nonattainment in mid-1997.
- o **Clean Fuels:** In 1998 all centrally-fueled fleets in 26 areas must buy 30% of the new vehicles that meet standards of 0.075 gpm VOC and 0.2 NOx; no toxic standards. If such vehicles are not being offered for sale in California the program is delayed possibly until 2001. Purchase requirements increase to 70% in 3rd year.

In 1996, 150,000 clean fuel cars are required to be sold in California; increasing to 300,000 per year by 1999. These cars must meet a standard of 0.125 gpm VOC. Phase 2 begins in 2001 with cars meeting fleet-type standards. Other cities can opt-in to program.
- o **Reformulated Gasoline:** Beginning in 1995 reformulated gasoline is required in the 9 worst ozone areas; minimum oxygen content (2.0%), benzene (1.0%), aromatics (25%), VOCs and toxics reductions (15%, up to 20-25% in 2000). Cities can opt-in.
- o **Oxyfuels:** Beginning in 1992, gas in 41 CO areas must have 2.7% oxygen level in winter months.
- o **Urban Buses:** Delays diesel particulate standard from 1991 to 1993. Beginning in 1994 all buses must meet a PM standard of 0.05 g/hphr (if not feasible EPA will set at 0.07). Based on performance EPA may implement a low polluting bus program in larger cities.
- o **Refueling:** After consultation with DOT on safety issues, EPA required to promulgate onboard controls. Stage II requirements vary by classification.
- o **Volatility:** 9 psi in most of the country beginning 1992; EPA can set lower levels in warmer areas, but cannot require any standard below 9 psi in attainment areas.
- o **Desulfurization:** Diesel fuel highway use limited to 0.05% sulfur by weight.
- o **Air Toxics:** Based on a study of mobile source-related toxics, EPA will regulate, at a minimum, emissions of benzene and formaldehyde.
- o **Non-road Engines:** Based on a study, EPA may regulate any category of non-road engines that contribute to urban air pollution. At a minimum, EPA must control locomotive emissions.
- o **Lead in Gasoline:** As of January 1, 1996, lead banned from use in motor vehicle fuel.



## Notes

NAAQS, EPA's determination that attainment is due to permanent emission reductions, and an approved maintenance plan [Section 107(d)(3)(E)].

### 5. DESIGNATION FOR LEAD

- a. EPA may require a state to designate areas for current lead NAAQS. This designation would generally be consistent with procedures for designating areas after promulgation or revision of NAAQS [Section 107(d)(5)].

### 6. PROCEDURE FOR PUBLISHING DESIGNATIONS

- a. EPA must publish specified designations and redesignations in the Federal Register. However, only redesignations are subject to notice and comment rulemaking [Section 107(d)(2)].

## B. Required State Submittals

### 1. OZONE

- a. Classification and Attainment Dates

- o General Requirements

- Based on design value (a measurement of pollutant concentration in parts per million), each nonattainment area is classified at the time of its designation (the date of enactment for some areas, 240 days later for others). Attainment dates are keyed to classification





## Notes

attain the applicable standard will be reclassified upward in accordance with a specified procedure and timetables [Section 181(b)(2)].

- Areas that are reclassified upward for nonattainment will be subject to all applicable requirements for their new classification with the exception that certain deadlines may be adjusted [Section 182(i)].
- Any severe area that fails to attain the standard is subject to special requirements which vary depending on whether the design value is above 0.140 [Section 181(b)(4)].
- In severe and extreme areas that fail to attain the standard, major stationary sources are subject to a penalty of \$5,000 (adjusted for inflation) for each ton of emissions in excess of a specified baseline amount [Section 185(a)-(b)]. EPA may collect this penalty if the state fails to do so [Section 185(d)].
- Exemptions are included for certain small areas [Section 185(e)].

### b. New Source Review Requirements

The Amendments contain a "grab bag" of provisions that alter NSR coverage on a pollutant- and classification-specific basis by lowering tonnage thresholds for



new and modified sources, setting minimum offset ratios, and changing the definition of major source and modification. These provisions are outlined below. (Except where noted otherwise, provisions stated for one classification also apply to all higher classifications.)

o Marginal Areas

- Offset Ratio: 1.1 to 1  
[Section 182(a)(4)].

o Moderate Areas

- Offset Ratio: 1.15 to 1  
[Section 182(b)(5)].

o Serious Areas

- Definition of Major Source: any stationary source or group of sources located within a contiguous area and under common control (i.e., includes fugitive emissions) [Section 182(c)].
- Tonnage Threshold: 50 tons per year (TPY) [Section 182(c)].
- Offset Ratio: 1.2 to 1  
[Section 182(c)(10)].
- Special Modification Provisions:
- & De Minimis Rule: A New Source Review (NSR) of modifications at existing sources will be triggered by a 25 TPY net emissions increase, aggregated over five years [Section 182(c)(6)].

## Notes

Sources Emitting Less than 100 TPY: The owner can avoid a NSR by netting (i.e., obtaining internal offsets) at a ratio of 1.3 to 1. Otherwise, NSR is triggered, except that the Best Available Control Technology (BACT) applies rather than the Lowest Achievable Emission Rate (LAER) [Section 182(c)(7)].

Sources Emitting More than 100 TPY: A New Source Review applies to increases greater than de minimis (as defined above) caused by any discrete pollutant-emitting activity, except that LAER will not apply if the owner obtains internal offsets of at least 1.3 to 1 [Section 182(c)(8)].

### ✱ o Severe Areas

- ✱ - Tonnage Threshold: 25 TPY [Section 182(d)].
- ✱ - Offset Ratio: 1.3 to 1, or 1.2 to 1 if the BACT for volatile organic compounds (VOC's) required at all existing major sources [Section 182(d)(2)].

### o Extreme Areas

- Tonnage Threshold: 10 TPY [Section 182(e)].
- Offset Ratio: 1.5 to 1, or 1.2 to 1 if BACT for VOC's is required at all existing major sources [Section 182(d)(2)].

- Special Rule for Modifications: For purposes of determining compliance with offset requirements, an emissions increase is not considered to be a modification if the owner obtains 1.3 to 1 internal offsets. Offset requirements do not apply to modifications consisting of installation of equipment to meet requirements of the Act [Section 182(e)(2)].

- o Submission Dates

- For all ozone nonattainment areas, State Implementation Plans (SIP's) or revisions that meet Part D NSR permit requirements, are due within two years of the enactment of the Amendments [Section 182(a)(2)(C)].

- c. Marginal Areas--SIP Submission Requirements

- o All ozone nonattainment areas - moderate to extreme -- must make the submissions applicable to lower-classified areas, unless specifically exempted [Section 182(b) (introductory language)]; [Section 182(c) (introductory language)]; [Section 182(d) (introductory language)]; [Section 182(e) (introductory language)].
- o Within two years after enactment, an inventory of actual emissions from all sources is due from each state containing all or part of a marginal area [Section 182(a)(1)].